In the claims:

Please substitute the following full listing of claims for the claims as originally filed or most recently amended.

- 1. (Original) A fiber optic transducer for measuring shear force or flow rate comprising
 - a floating head,
 - a reference surface,
- a cantilever means extending between said reference surface and said floating head, and
- a plurality of integral fiber optic sensors arranged to sense relative motion between said reference surface and said floating head, each said integral fiber optic sensor comprising
 - a tube,
 - a fiber optic element having an end within said tube, and
 - a reflective surface positioned by said tube at a location spaced from said end of said fiber optic element by said tube.
- 2. (Original) The transducer as recited in claim 1 wherein said plurality of integral fiber optic sensors are symmetrically arranged around said cantilever.
- 3. (Original) The transducer as recited in claim 2 wherein said plurality of integral fiber optic sensors comprise two integral fiber optic sensors.
- 4. (Original) The transducer as recited in claim 1 wherein said plurality of integral fiber optic sensors comprise two integral fiber optic sensors.
- 5. (Original) The transducer as recited in claim 1 wherein some of said plurality of integral fiber optic sensors are bonded to said cantilever means.

- 6. (Original) The transducer as recited in claim 1 wherein said reflective surface is formed by an end of an optical fiber.
- 7. (Original) The transducer as recited in claim 1 wherein said end of said optical fiber is substantially flat.
- 8. (Original) The transducer as recited in claim 1, further including

a housing surrounding said cantilever means and said plurality of integral sensors.

- 9. (Original) The transducer as recited in claim 8, wherein said housing includes a bellows sealed to said floating head.
- 10. (Currently Amended) The transducer as recited in claim 9 wherin wherein said bellows further includes a spring.
- 11. (Original) The transducer as recited in claim 1 wherein said cantilever means is formed of an alloy.
- 12. (Original) The transducer as recited in claim 1 wherein at least two of said integral sensors are matched for responses to temperature and pressure.
- 13. (Original) The transducer as recited in claim 1 wherein at least two of said plurality of integral sensors are substantially insensitive to temperature variation.
- 14. (Original) The transducer as recited in claim 1 wherein an integral sensor of said plurality of integral sensors includes a plurality of gaps.

- 15. (Original) A flow rate or shear force telemetry system including
- a fiber optic transducer for measuring shear force or flow rate comprising
 - a floating head,
 - a reference surface,
- a cantilever means extending between said reference surface and said floating head, and
- a plurality of integral fiber optic sensors arranged to sense relative motion between said reference surface and said floating head, each said integral fiber optic sensor comprising
 - a tube,
 - a fiber optic element having an end within said tube, and
- a reflective surface positioned by said tube at a location spaced from said end of said fiber optic element by said tube, and signal processing means including common mode signal rejection processing.